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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,291	01/03/2002	Colette Cozean	COZEAN.001A	8339

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EXAMINER

KRASS, FREDERICK F

ART UNIT	PAPER NUMBER
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1614

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/039,291

Applicant(s)

COZEAN ET AL.

Examiner

Frederick F. Krass

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 1-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 37-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Restriction Requirement

Applicant's election of Group IV in Paper No. 7 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 1-36 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim.

Indefiniteness Rejection

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 38-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is no antecedent basis for "said light beam" in claim 38.

Anticipation Rejection

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 37 is rejected under 35 U.S.C. 102(b) as being anticipated by Rechmann (USP 5,762,493).

The prior art discloses a handheld device (i.e. a "home treatment system") comprising a light source which produces wavelengths in the range of between 300 and 700 nm (col. 4, line 36), and a flushing liquid containing a fluoridizing agent such as calcium fluoride (col. 4, lines 17-23). This liquid is both a fluoride "mouthwash" and "mixture" as required by the instant claim, where those terms are given their broadest reasonable interpretation, consistent with the teachings of the specification. Moreover, the light source is "adapted" to illuminate the flushing liquid, as is self-evident from the cited portion of the reference.

Obviousness Rejection

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1) Claims 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rechmann, taken in view of Boutousssov et al (USP 6,439,888).

The primary reference discloses a handheld device (i.e. a "home treatment system") comprising a light source which produces wavelengths in the range of between 300 and 700nm (col. 4, line 36), and a flushing liquid containing a fluoridizing agent such as calcium fluoride (col. 4, lines 17-23). This liquid is both a fluoride "mouthwash" and "mixture" as required by the instant claim, where those terms are given their broadest reasonable interpretation, consistent with the teachings of the specification. Moreover, the light source is "adapted" to illuminate the flushing liquid, as is self-evident from the cited portion of the reference.

The primary reference differs from the instant claims insofar as it uses a laser for illumination, rather than an incoherent light source (an LED). It is well-known in the dental art however, that LED's, especially those emitting wavelengths in the blue range (400-600nm), are preferred over lasers for use in hand-held devices, because they render the devices easier to manipulate within the oral cavity. See col. 1, lines 18-23 of the secondary reference, which differs from the instant claims insofar as it does not specifically disclose incorporating a fluoride mixture or mouthwash.

It would have been obvious to have substituted an LED for the laser light source in the hand-held devices of the primary reference, motivated by the desire to improve

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the ability of the devices to be manipulated within the oral cavity as taught by the secondary reference.

2) Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rechmann, taken in view of Haider et al ("Combined effects of argon laser irradiation and fluoride treatments in prevention of caries-like lesion formation in enamel: an *in vitro* study", *Journal of Clinical Pediatric Dentistry*, Vol. 23, no. 3 (1999)).

The primary reference discloses a handheld device (i.e. a "home treatment system") comprising a light source which produces wavelengths in the range of between 300 and 700 nm (col. 4, line 36), and a flushing liquid containing a fluoridizing agent such as calcium fluoride (col. 4, lines 17-23). This liquid is both a fluoride "mouthwash" and "mixture" as required by the instant claim, where those terms are given their broadest reasonable interpretation, consistent with the teachings of the specification. Moreover, the light source is "adapted" to illuminate the flushing liquid, as is self-evident from the cited portion of the reference.

The primary reference differs from the instant claims insofar as it does not specify a flushing liquid containing a very low proportion of fluoride. It is well-known in the dental art, however, that using a very low proportion of fluoride (as low as 0.01ppm) in conjunction with laser illumination provides dramatic increases in resistance to caries formation. See the secondary reference at the first paragraph of the lefthand column at page 254, which differs from the instant claims in that it relates to a *in vitro* laboratory

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study, and so does not specifically disclose a "home treatment" system as recited instantly.

It would have been obvious to have used a very low proportion of fluoride in the flushing liquids of the primary reference, motivated by the desire to optimize caries resistance as taught by the secondary reference.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick Krass whose telephone number is (703) 308-4335. The examiner can normally be reached on Monday, Tuesday and Thursday from 9am to 5pm, and on Fridays from 11am to 7pm. The examiner is off Wednesday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marianne Seidel, can be reached at (703) 308-4725. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4556.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0193.

Frederick Krass
Primary Examiner
Art Unit 1614

